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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,350	10/16/2000	Tatsuki Kouwa	Q61020	9796

7590 04/27/2004  
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EXAMINER

GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/688,350	Applicant(s) KOUWA ET AL. <i>in</i>	
	Examiner Julio C. Gonzalez	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sada et al.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

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### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sada in view of Beyn.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

However, Sada et al does not disclose using LED for a light emitting element.

On the other hand, Beyn discloses for the purpose of providing desirable safe operating conditions for alternator systems, a battery 24, a switch 42, a light emitting diode 46 connected to a current limiting resistor 60 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage control apparatus as disclosed by Sada et al and to modify the invention by using an LED for the purpose of providing desirable safe operating conditions for alternator systems as disclosed by Beyn.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sada et al in view of Mashino.

Sada et al discloses a voltage control apparatus for a vehicle (see title) having a battery 3, an ignition switch 4, a light emitting element 5 connected in series with the switch 4, a resistor 141 for limiting current flowing through light emitting element 5 (column 6, lines 10-15) and the resistor being disposed between a transistor 140 and input terminal T3 (see figure 1).

However, Sada et al does not disclose explicitly having a voltage detector circuit.

On the other hand, Mashino discloses for the purpose of providing an inexpensive way of controlling the voltage of a generator and reduce fluctuation of the characteristics of the magnetic circuit of generators, a circuit for detecting the voltage of a control apparatus (see abstract & column 2, lines 19-23, 48-51).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage control apparatus as disclosed by Sada et al and to use a voltage detection circuit for the purpose of providing an inexpensive way of controlling the voltage of a generator and reduce fluctuation of the characteristics of the magnetic circuit of generators as disclosed by Mashino.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sada et al and Mashino as applied to claim 4 above, and further in view of Beyn.

The combined voltage apparatus discloses all of the elements above. However, the combined voltage apparatus does not disclose using an LED as light emitting element.

On the other hand, Beyn discloses for the purpose of providing desirable safe operating conditions for alternator systems, a battery 24, a switch 42, a light emitting diode 46 connected to a current limiting resistor 60 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined voltage control apparatus as disclosed by above and to modify the invention by using an LED for the purpose of providing desirable safe operating conditions for alternator systems as disclosed by Beyn.

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***Response to Arguments***

7. Applicant's arguments filed 03/04/04 have been fully considered but they are not persuasive.

Claim 1 discloses a resistor for limiting current flowing a light-emitting element disposed between a transistor within a voltage controller and an input terminal.

Moreover, claim 1 discloses that no other transistor is disposed between said transistor and the light-emitting element. Respectfully, due the broadness of the claim, the claim is not specific enough as to differentiate between the prior art and the present invention. More specifically, Sada et al discloses specifically having a resistor 141, which it is between a transistor 140 and the input terminal T3. No other transistor is between transistor 140 and the input terminal T3. Claim 1 does not provide a more specific use for the transistor within the voltage control apparatus. Sada et al uses the transistor 140, which is use to be turn on/off, thus affecting the switch (column 4, lines 46-49). Moreover, resistor 141 is use as a voltage divider (column 4, lines 31-33), which consumes current and it is also disclose explicitly that resistor 141 absorbs currents (column 6, lines 21-23). Moreover, it is disclose that current flows into the input terminal T3 (column 4, lines 26-29). Also, respectfully, figure 1 of the Applicant's present application shows a transistor 114, which is connected in series to a transistor 113, so in theory, there is another transistor, which if read with a different interpretation, could contradict what is disclosed in claim 1.

With regards to claim 4, the claim discloses a circuit that detects a voltage at an input terminal and such circuit is able to be shutdown when the generator operates. Mashino discloses circuit which excites the operation of a generator and such

circuit is able to be shutdown (column 2, lines 19-22, 34, 35). Respectfully, the claim is not specific enough to differentiate between the prior art and the present invention since the prior art stills reads on the claims.

8. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both references, Sada et al and Mashino et al deal with controlling alternator, specifically for vehicles.

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***Allowable Subject Matter***

9. Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



In particular with regards to claims 3, the prior art fails to disclose that light emitting element is coupled through an ignition switch to a base terminal of an NPN transistor for starting an operation of the voltage control apparatus so that the light emitting element is turned on by a current flowing into the base terminal. With regards to claim 5, the prior art fails to disclose that after the circuit for detecting the voltage of the input terminal and starting the voltage control apparatus is shutdown after the vehicle generator starts electric power generation operation, an operation of a starting circuit for the voltage control apparatus is maintained by an output one phase of the vehicle generator.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire  
THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will


be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is 571-272-2024. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jcg

  
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4-26-04